



# Creating a product catalog with djondb

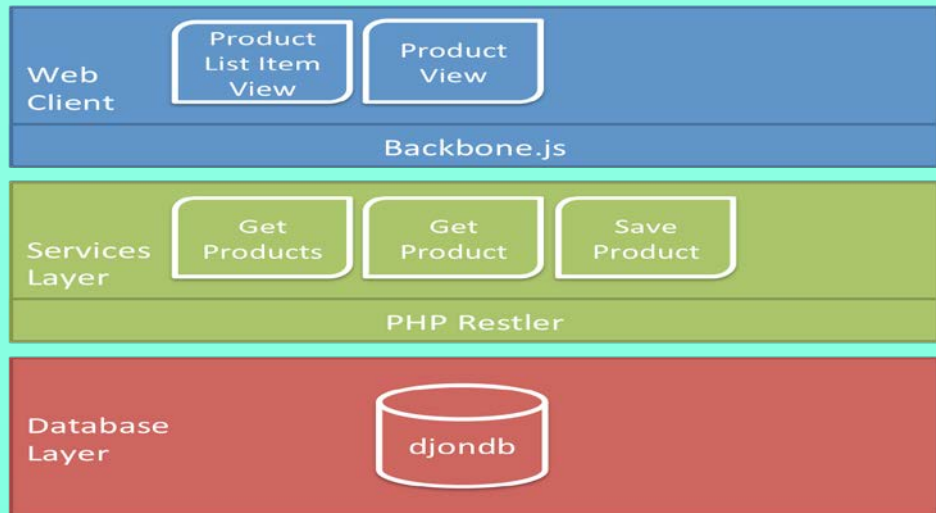
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## Abstract

- ❑ DjonDB is a document based database whose query language is similar to SQL which makes it easy for the users to understand
- ❑ All the documents in DjonDB are stored in files and organized by namespace in the data folder.
- ❑ Each database may contain one or several namespaces, and these namespaces may contain several documents.
- ❑ We have created a product catalog with DjonDB, PHP Restler and Backbone JS
- ❑ In our application user will be able to
  1. Browse available products
  2. See product details
  3. Add a new product to the catalog
- ❑ We want to use a web browser to use the application, so the client will be an HTML, CSS and JavaScript application created with Twitter Bootstrap and Backbone.js.

## Introduction

- ❑ With the entry of internet, storing large amounts of document data became a necessity and relational databases are not equipped to deal with this kind of data.
- ❑ As the queries in the document database are dynamic and unpredictable, it becomes schema less.
- ❑ DjonDB is a free database empowering your JSON documents with transactions and a Query language similar to SQL making the transition to modern applications easier than ever.
- ❑ In our project we want to show how simple an application like product catalog can be created using NoSQL database especially with DjonDB when compared with relational database
- ❑ In this application we have used PHP Restler, which will store and retrieve data from the DjonDB database
- ❑ We have created PHP rest services to provide functions like browsing, viewing and adding.
- ❑ This is the architecture diagram of our application



## Design and Implementation of product catalog

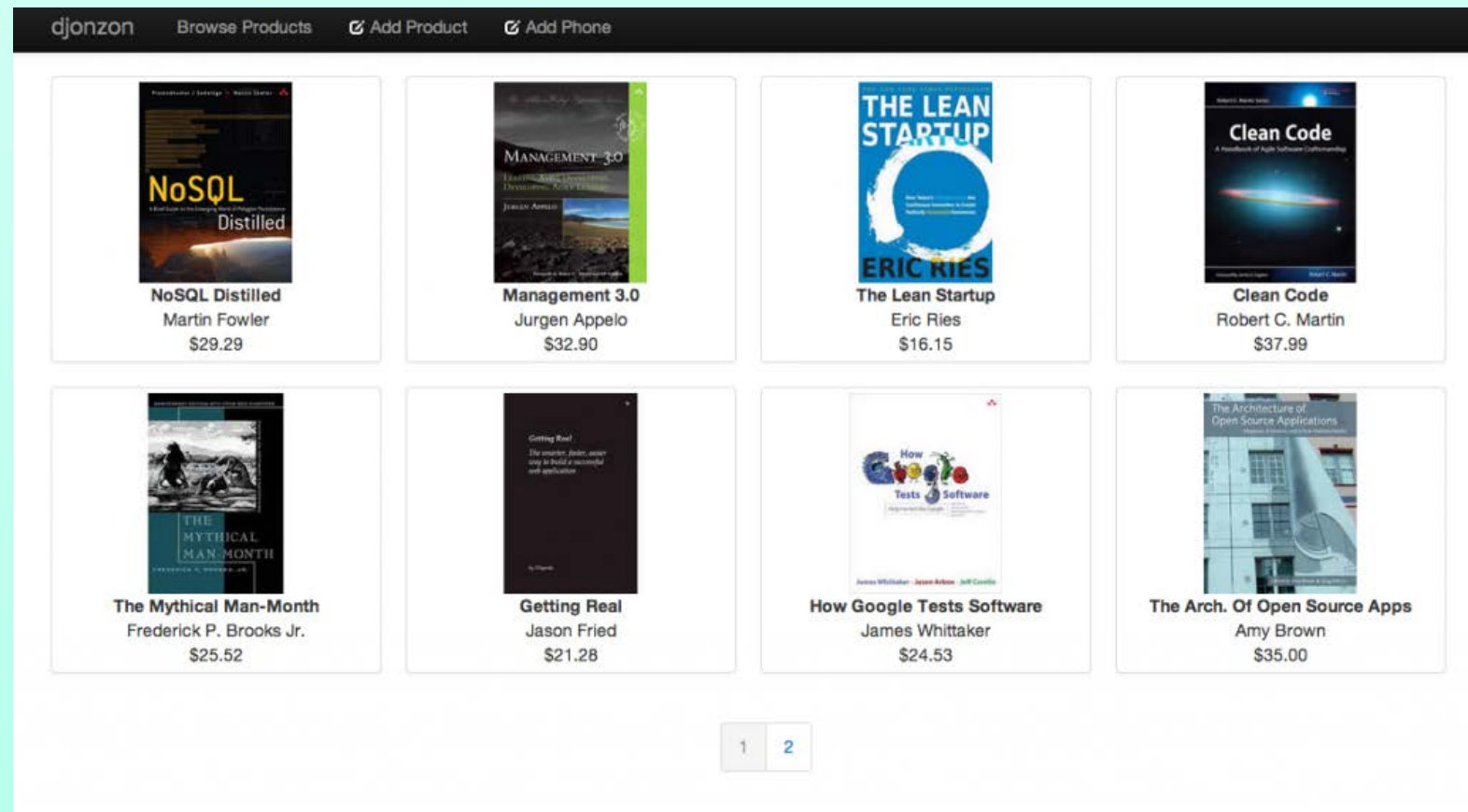
- ❑ In our application the main entity is the book, which have properties such as Author, ISBN and Release Date among others
- ❑ In a traditional relational database model, we'll surely create a Book table for storing books of the catalog as shown in the image below

Column Name	Data Type	Allow Nulls
BookId	uniqueidentifier	<input type="checkbox"/>
Name	nvarchar(50)	<input checked="" type="checkbox"/>
Price	float	<input checked="" type="checkbox"/>
Picture	varchar(256)	<input checked="" type="checkbox"/>
Author	nvarchar(50)	<input checked="" type="checkbox"/>
ISBN	varchar(50)	<input checked="" type="checkbox"/>
ReleaseDate	datetime	<input checked="" type="checkbox"/>

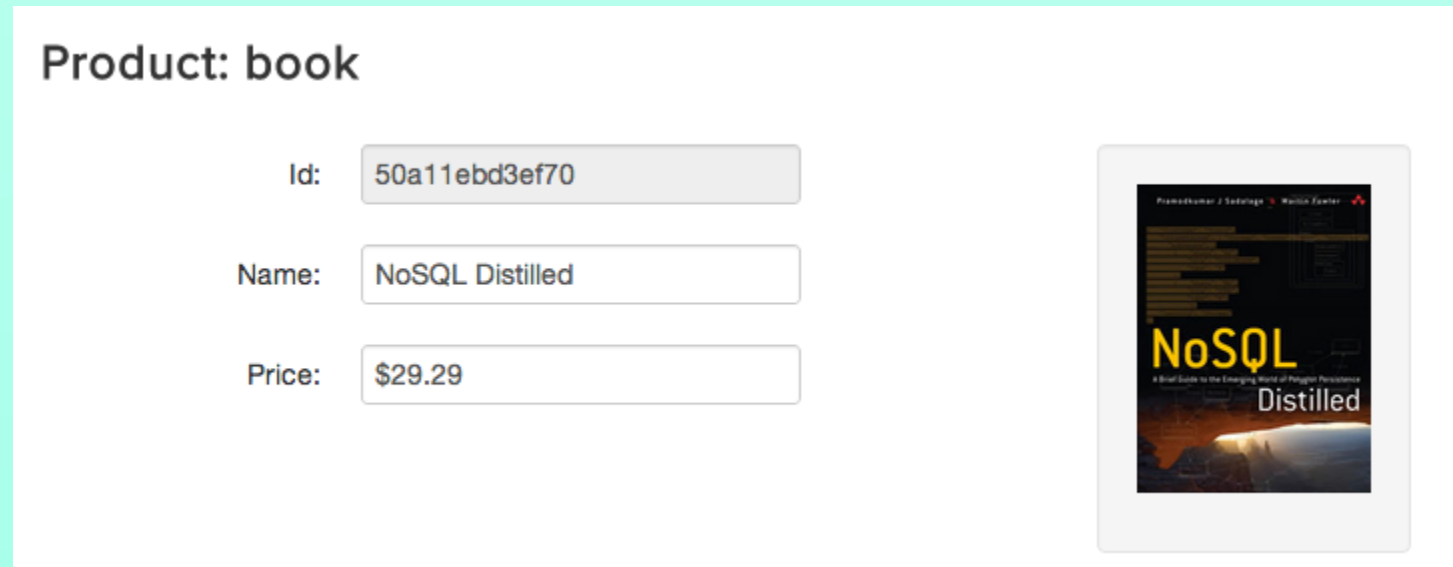
- ❑ DjonDB stores data in a BSON format, in simple terms is binary representation of the JSON format

```
product: {
  _id: 1,
  prodtype: book,
  name: NoSQL Distilled,
  picture: nosql.jpg,
  author: Martin Fowler,
  price: $29.29,
  releasedate: 2012/08/08,
  isbn: 0321826620
}
```

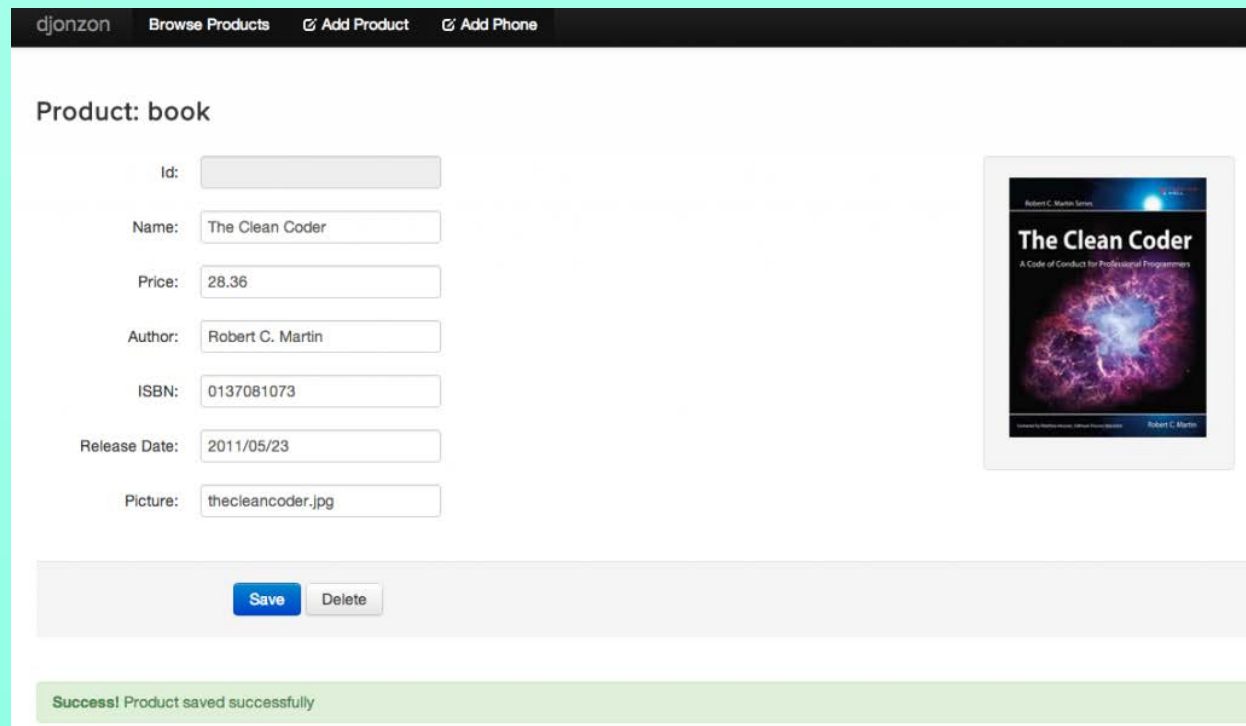
- ❑ In our project we used apache as our application server and service layer of our application is done using PHP Restler
- ❑ User interface components are created using backbone to consume the services we have created
- ❑ After running the djondb server in terminal, open localhost/djonzon/ in webserver to view the product catalog.



- ❑ We can view the product details by clicking on the product

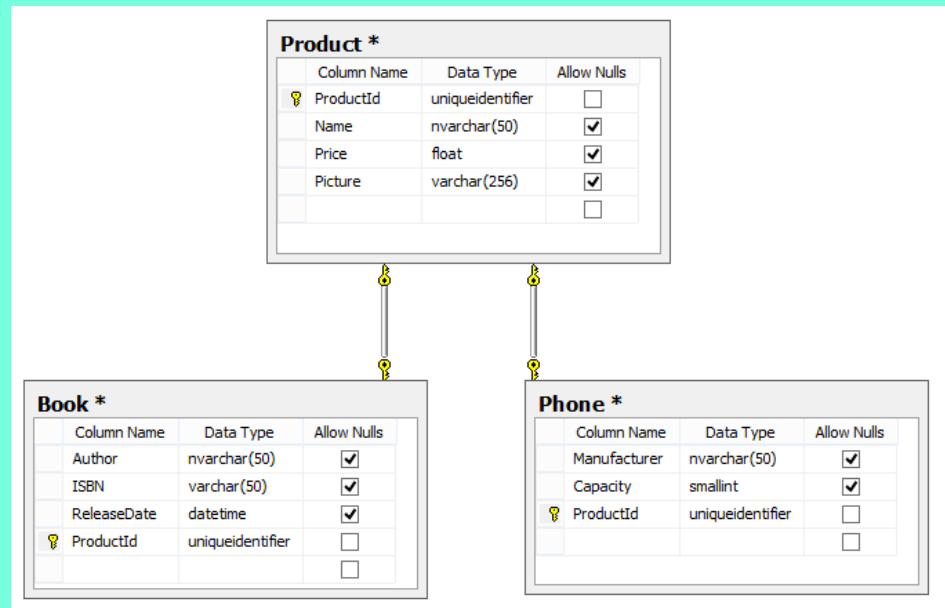


- ❑ We can also add new products by using the “Add product” or “Add phone”



## Conclusion

- ❑ The main objective of the project is to use DjonDB to create a data model and to implement on a real life platform.
- ❑ In this project, we created web based product catalog data model using DjonDB, with the PHP Restler and backbone JS support.
- ❑ When compared with a traditional relational database, Djondb requires very less work for the support while creating new entities or queries.
- ❑ As for example we want create a phone entity in the product catalog using SQL, we have to create a new table for phone and if there are no common properties we should create product table to store. Moreover, for the real data processing we need to create entirely new SQL script from low level.



- ❑ So, leaving all this work, we can easily create the phone just updating the UI in DjonDB i.e., we just need to update the UI for supporting the new product type and new namespace for saving the details.
- ❑ As a whole, DjonDB provides rapid development and almost zero maintenance while adding new features and improvements for the application.